

## CULTIVATING CORN TO ERADICATE WEEDS



Goats Cleaning Out Weed Patch.

It has been shown in experiments with corn made by the United States department of agriculture that weed eradication is the principal if not the only beneficial result of cultivating this crop after planting. This means that in cultivating the corn crop the implements used should be designed primarily for accomplishing the destruction of weeds in the easiest and cheapest manner. It seems to indicate further that as weed control becomes more thorough, intercultural tillage of growing crops may be accordingly decreased.

Far more important than to kill the weeds is to avoid having weeds to kill. In other words, the farmer should aim to prevent rather than to cure the evil. A farm may be made almost free of weeds by strictly observing the following three principles: (1) prevent weeds from going to seed on the farm; (2) prevent weed seeds being brought to the farm, and (3) in case of perennial weeds, prevent them from making top growth, which will finally starve out the underground parts.

Equally as important as these three principles, however, is the man behind them. Many men make a start to clear their farm of weeds, but quit too soon. Often the campaign is stopped when



Where Weeds Predominate.

success is in sight, and the weeds soon recover. Clearing a farm of weeds, especially perennials, is no easy task; it requires more than average intelligence and perseverance. If, however, one decides on a systematic plan of attack based on these three principles, and sees this plan faithfully through to a finish, he can practically rid his farm of weeds, and this without a great amount of labor and expense.

## PROVIDE SHADE FOR POULTRY

Platform Built About Two Feet From Ground and Covered Will Prove Entirely Satisfactory.

When poultry is penned the fowls should be furnished plenty of shade. If natural shade is not at hand, artificial shade should be furnished. A good plan is to build a platform 18 inches or two feet from the ground, and if it is so it can be removed, the earth can be dug up underneath, making a splendid place for the hens to spend the hot part of the day. Rails, posts or boards make the best materials to cover the platform. During wet, rainy weather the hens have an inclination or desire to get up on to something out of the mud. They will get on the woodpile, the fence, a wagon, or, in fact, anything, to be up off the ground. The platform just mentioned makes a splendid rest for them. During hot, dry weather the hens get under the platform for shade, and during the wet weather they get on top of it out of the mud.

## SURPRISES IN RECORD SHEET

Cow That Was Thought to Be Most Profitable May Have Least Total of Butterfat.

After keeping records for a year there will no doubt be some surprises indicated by the record sheet. The cow that was thought to be the most profitable as indicated by the amount of milk may have the least total butterfat, due to low test, and the one that milked the least and kept in a thin condition may, because of big test, be producing as much butterfat as any cow in the herd.

## INJURY BY LEAF ROLL

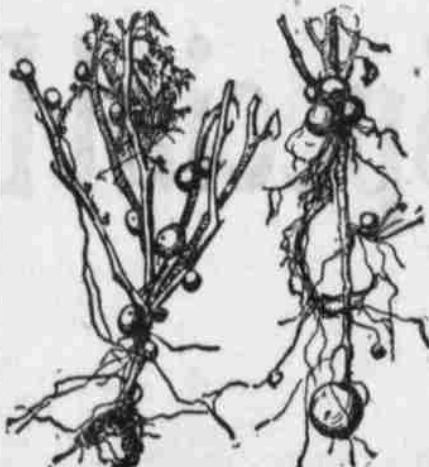
Better Seed Stocks Offer Best Means of Control.

Where Disease Has Appeared This Season It Is Wise Precaution to Import Seed From Other Sources for Next Crop.

(By W. ORTON.)

No measure offers more hope of success in controlling leaf roll than the use of better seed stocks. Three means may be used to bring this about: First and simplest, the importation of seed potatoes from districts where the disease is unknown. This affords relief, but may not greatly raise the standard of quality. Second, hill selection, to pick out from weak varieties strains that will withstand the disease. This has been done already by Von Lochow, who took several types from the variety Professor Wohltmann and bred them in pure lines. The result was that certain of these pure strains showed susceptibility to leaf roll, while others remained entirely or nearly free from it. Third, new varieties may be bred from seed. This, while requiring the most time, may be the best means for meeting the requirements where whole districts are attacked, as in the Colorado outbreak a few years ago. That such good varieties can be produced one can hardly doubt after seeing the collection of the agricultural department of over 10,000 seedlings with its infinite variety of disease-resistant qualities.

It is the prevailing opinion of European investigators that leaf roll is inherited—i. e., that the tubers from diseased hills will produce diseased progeny. Cases are cited where the first crop after the appearance of the



(A) Plant Showing Aerial Tubers Caused by Leaf Roll—(B) Plant Affected by Leaf Roll, Showing Tendency of Tubers to Cluster at the Base of the Stem.

disease was normal, but later harvests fell to nothing. No reliable results are available in this country. Conflicting reports come from farmers in the Greeley section of Colorado; but, as no pathologist accustomed to the diagnosis of leaf roll saw either crop, the relative amount of disease in home-grown and outside seed remains unknown.

It seems a wise precaution to use only selected seed from such sources as Minnesota and Wisconsin for planting next year where leaf roll has occurred this season. It may be that the disease will not appear on crops from home seed, but the chances are that it will.

## USE REPELLANT FOR GAD FLY

Mixture of Tar and Lard on Nose of Sheep Is Recommended—Keep Animals in Dark Barn.

In the summer or early fall the egg of the gad fly is laid that causes grub in the head of sheep. A fly does the work, and the best way to prevent the grub is to prevent the egg being laid. A mixture of tar and lard smeared on the noses of the sheep herds repels the fly. This may be done on a large scale by forcing the sheep to take their salt out of auger holes made in logs or in boxes provided for the purpose, in fly season. Then keep these holes smeared with the tar and lard. It also helps to have a dark barn where the sheep can stand during the day, as the fly will not bother them much in there.

## LAND RESTED AND IMPROVED

Old Notion About Crop of Timothy Is Erroneous—Plant Food Is Taken More Slowly.

It is an old notion that land seeded to timothy, even though the crop be removed, is being rested and improved. This, however, is not true in any other sense than that a horse that has been driven rapidly may be considered as being rested by being driven more slowly. That is to say, timothy removes the plant food from the soil more slowly than does corn or wheat because a smaller amount of plant food is required to make the crop.

## PLAN FOR SHOCKING WHEAT

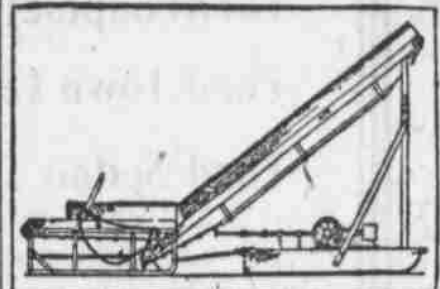
Tops and Buts of Two Bundles Are Spread in Manner to Turn Water and Protect Grain.

Twelve bundles make a good shock. Three pairs of bundles are set in a row against each other. The spaces on the sides are filled by setting two bundles on each side. Then the tops of the bundles are drawn together by "hugging" the shock. The tops and butts of two bundles are spread and put on top of the shock as a way to turn water and protect it.

## GRAIN MACHINE IS PORTABLE

Designed to Handle Considerable Acreage With Little Help—Engine Has Flexible Shaft.

Stacking small grain may be a "lost art" in some sections, but in others, especially where the acreage is not too big and the problem not too acute, it is not lost; in fact, it is coming back, and the wet year of 1915, and the resulting low grade and loss of grain has done much to bring it back. For the handling of considerable acreage with little help such a machine as the one shown here,



Unloader and Stacker.

a recent patent of two Oklahoma men, is especially designed, and will immediately appeal to many readers who suffered heavy losses last year. This machine is portable, being set on front and rear trucks. On the rear truck is a horizontal conveyor onto which is pitched the bundles to be carried to the rear truck and then upwards to the top of the stack, or into the barn. An engine is mounted on the front truck in the rear of the stand, this engine having a flexible shaft.—Farming Business.

## MOLTING PERIOD IS TRYING

Poultrymen Wishing Winter Eggs Are Anxious to Get Hens Through Ordeal at Early Date.

The annual molt, which starts with the arrival of dog days, is a most critical time in the life of hens. Shedding old feathers and growing new ones comes when the vitality is at a low ebb. In a normal molt about four months are required for a complete change of plumage, the first feathers beginning to fall about July 1. At first the egg production does not materially decrease, but as the process advances the drain on the system increases until the production gradually diminishes toward September 1. Usually egg-laying will not commence again until the new set of feathers is complete.

If, however, the poultryman is fortunate enough to bring his hens successfully through the molt and get them laying by mid-November, the fowls will probably continue to lay throughout the winter. Thus poultrymen wishing to produce winter eggs for markets are very anxious to get their hens through the molt at an early date.

## BEST QUALITY IS ESSENTIAL

Margin of Profit Worth Considering in Peach Business—Thinning Is Important Factor.

Peach profits are greatly reduced by the cost of picking and packing and marketing. It is the best quality of fruit that brings the profit and there is really very small chance to make a profit on any other kind of peaches. It costs more to pack a basket of small fruit than it does a basket of large specimens as there are more to handle. The same thing applies to picking. The package costs the same regardless of the quality of the fruit. There is no difference in the shipping cost of a basket of culls and a basket of fancy fruit. It follows that it is the margin of profit which is worth considering in the peach business the same as in any other business. It is not the cull that pays and thinning is the most important factor in eliminating the cull peach.

## CAUSES FOR SCOURS IN PIGS

Quarters and Troughs Should Be Kept Clean to Prevent Trouble From This Source.

Scours in pigs is a symptom of indigestion and is usually caused by too much feed, changing the feed of the sow, dirty pens or chilling the sow in cold rains or winds. The quarters and troughs should be kept clean with plenty of sunlight and good ventilation to prevent trouble from this source. If scours should appear in pigs in spite of all precautions, the following treatment is recommended by the Missouri agricultural experiment station: Clean up more thoroughly than before, reduce the sow's feed and give a tablespoonful of sulphur in each feed for several days. It is also well to give the sow a good dose of epsom salts. If practicable, each pig may be given a teaspoonful of castor oil or epsom salts. Charcoal also should be provided.

## INTENSIVE METHODS ON FARM

Average Crop of Strawberries Is 1,700 Quarts to Acre—Maximum Placed at 16,000.

Just to show the difference between an average crop and what may be grown under intensive methods, it is stated that the average crop of strawberries is 1,700 quarts to the acre, while the maximum record of production is 16,000 quarts. While this variation is probably much greater than that generally found in other crops, yet no doubt the proportion is not very far from correct in its application to most farm crops, as well as fruit.

## CONCRETE WATER TANK

Superior in All Respects to Any Other Receptacle.

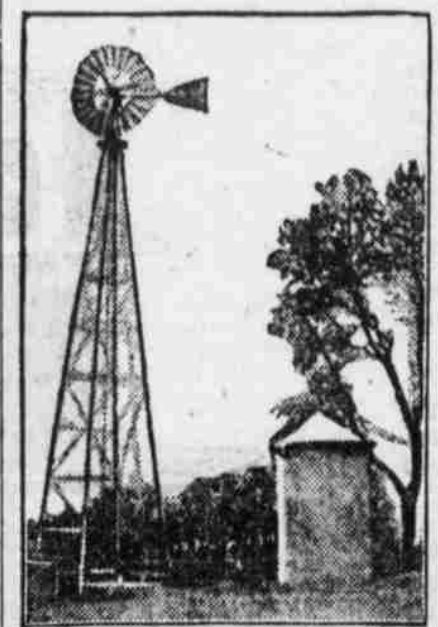
They Are Not Difficult of Construction, Easy to Clean, and Do Not Rot or Rust—Carefully Proportioned Materials.

Concrete tanks, if properly built, are superior in all respects to any other kind of a tank for storing water. They are easy to clean, and do not rot or rust. The concrete mixture should be in proportions one part cement to one and a half parts clean but rather fine sand, to three parts screened gravel or broken stone.

A tank, in order to withstand water pressure and not leak is best built by laying the concrete without stopping. Even then there are other essential things, which, if disregarded, will produce a leaky tank. The concrete must be mixed so wet that it will flow over and around the metal reinforcements and against the forms. The materials for the concrete must be very carefully proportioned and the stones small enough to pass a three-fourths-inch mesh screen. A concrete made by using very clean screened gravel makes a denser concrete than broken stone. It flows into place better, and is not so apt to have voids and stone pockets which let the water through.

Square tanks do not stand water pressure so well as round, because the sides tend to bulge, but they are all right if not more than four feet deep and eight feet square.

Sometimes tanks are constructed by filling one or two sections of forms each day, letting it set overnight and continuing the next day. This is a bad practice, because it is readily seen that a joint is formed on the surface



Windmill and Round Tank.

of each layer of concrete which is placed on top of another layer that has set up and hardened. To make the joint as tight as possible the top surface of the old concrete must be specially treated.

The operation for treating the surface is as follows: Scrape off all dirt and scum from the old surface, pick it with a pick or scrub it thoroughly with a wire brush or horse currycomb, in order to remove all surface mortar and scum and leave a very rough surface. To make the bond between this cleaned surface and the new concrete, wet it thoroughly, soaking it well, place a one-fourth-inch to one-half-inch layer of one part cement to one part sand, or, better still, a layer of pure cement, on the cleaned surface, and before this has set or begun to stiffen place the new concrete upon it.

## MINERAL MATTER IS NEEDED

Material for Making Bone and Feathers and Formation of Egg Shells Must Be Supplied.

All of the grains contain what is called ash, which supplies material for the making of egg shells. While the chicks are growing they also demand mineral matter for the making of bone and feathers. If the hens cannot find enough lime to supplement that found in the grain they eat, some form of lime must be given. A hen laying 100 eggs a year will require 1.6 pounds of mineral matter for the shells. A high-laying hen ordinarily cannot find enough lime in the yard to supply the demand. Oyster shells are a cheap source of lime. They contain about 95 per cent of lime. Dry ground bone contains about 49 per cent of carbonate of lime, and has other value in addition to the mineral matter it supplies. Ground bone is especially good for growing chicks.

## TEAMS SUFFER FROM THIRST

Three Times Daily Is Not Sufficient for Live Stock—Five Times Is Better Plan.

When you want a drink of water, probably your team wants one, too. Three times a day is not enough to water live stock. They should have, especially in hot weather, an opportunity of drinking at least five times daily—before every meal and at intervals of two and a half to three hours apart between meals.

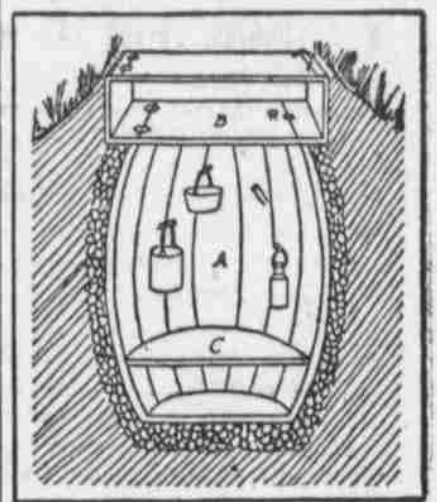
The animal that works in hot weather on a five or six-hour stretch without water suffers intensely from thirst. Frequent watering prevents water colic and other ill effects.

Never allow the animal to drink when very hot. Always force him under such conditions to drink a little at a time until satisfied.

## PLACE FOR DAIRY PRODUCTS

Large Barrel Sunk In Ground and Filled In With Small Stones and Gravel Is Convenient.

A very convenient and serviceable place to keep dairy products may be made by sinking a large barrel in the ground. A shady spot should be chosen, writes G. C. Arnt of Beatrice, Neb., in Farmers' Mail and Breeze. Fill in around the barrel with small stones, gravel and sand, and dampen. Put a box over the barrel, and bank up with solid earth, preferably clay. This drains off the water when it rains and



Summer Refrigerator.

also puts the barrel further down, which tends to make it cooler. Make a light lid for the top of the barrel, and a strong lid for the outer covering of box. Fit the box as near airtight as possible. Sprinkle a little dampened sand over the bottom of the barrel, and the little cellar is finished. Pails of cream, milk and butter may be hung from nails on the sides of the barrel. Air the barrel out occasionally to prevent odors from collecting.

## CURE FOR THE KICKING COW

Rope or Strap May Be Arranged on Animal's Body Making It Inconvenient for Her to Lift Foot.

Select a rope or strap long enough to pass around the cow's body at the hips with about a foot of rope to spare and fasten a ring in one end. Place the rope around cow's body just back of the hips and in front of the udder. Put the rope through the ring and draw it reasonably tight and fasten it by slipping the loose end under the taut rope. This will be found to bind the muscles of the hind quarters so it is very inconvenient for the cow to lift her foot. If the cow is a vicious kicker, the rope will need to be drawn up pretty tight. The cow will make many efforts to kick and may succeed in raising her foot pretty high the first few times this method is applied, but she will finally give up. Don't forget that your success with this method depends on keeping at it until the mere presence of the rope around her body will suffice.

## CLEAN THE DAIRY UTENSILS

First Rinse With Cold Water to Remove Milk Particles—When Possible Place in Sunlight.

Milk utensils should first be rinsed with cold water to remove all particles of milk, then thoroughly scrubbed with a brush in warm water to which a little good washing powder has been added. They should be steamed or at least rinsed in boiling water. No wiping cloth should come in contact with them after scalding. When possible, all utensils should be placed in good sunlight and pure air.

The separator, of course, must also be cleaned thoroughly. No one should place any confidence in the claim that separators wash themselves by simply running water through them. Washing a separator is not a difficult task if done soon after separating. The water for washing should be warm, but not enough to cook the curd.

## GUARD AGAINST WHEAT RUST

Department of Agriculture Issues Warning Against Use of Seed From Western States.

All farmers east of the one hundred and fourth meridian, which runs near Cheyenne and Denver, are urged by the department of agriculture not to purchase for seed any wheat grown west of that line. A very destructive rust of cereals, known as stripe rust, has been found in this country, but thus far it is known to occur only west of the one hundred and fourth meridian. The spores of this particular kind of rust may be distributed on the seed of grain; hence the precaution against using seed from regions where the rust exists. The shipment of wheat for milling may disseminate this rust along the rights of way of railroads, but that is something that is very difficult to control.

## CHICKENS WITH WEAK LEGS

Caused by Feeding Too Much Protein, or Too Much Heat in Brooder—Feed Oyster Shells.

Leg weakness in chickens is caused by feeding the young chicks too much protein, or too much heat in the brooder. In case the brooder is overheated reduce the temperature, but not to a degree that will make the chicks uncomfortable. In case the difficulty is caused through excess of protein, increase the ash by feeding oyster shells. Leg weakness generally is overcome when conditions are changed by proper feeding methods.